ERNEST ORLANDO LAWRENCE
BERKELEY NATIONAL LABORATORY

Pandemic Preparedness and Response Plan

Pandemic Preparedness and Response Plan
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Disclaimer

This plan was developed based on currently available information from the United States Centers for Disease Control (CDC), the United States Department of Health and Human Services, the United Nations World Health Organization (WHO), and the Alameda County Public Health Department. Ongoing situational developments and research may, and probably will, change these recommendations frequently.

This plan is intended to be used as a fluid and flexible guideline for dealing with the problems associated with a Pandemic Influenza outbreak in our home area, and not as a strict policy and procedure. Please keep this in mind when applying these recommendations.

Thank you.

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1. Introduction

Influenza is a viral respiratory illness that infects humans and other animal species. In the U.S., complications of influenza cause an average of 36,000 deaths each year. Influenza viruses are unique in their ability to cause sudden infection on a global scale. A pandemic occurs when there is a major change in the influenza virus so that most or all the world's population has never been exposed previously and is vulnerable to the virus. Three pandemics occurred during the 20th century. The Spanish Flu, in 1918 caused over 500,000 U.S. deaths and more than 20 million deaths worldwide. The Asian Flu Pandemic of 1957-58 and the Hong Kong Flu Pandemic in 1968-69 also had a significant impact causing widespread illness and death. Recent outbreaks of human disease caused by avian influenza strains in Asia and Europe have highlighted the potential for new influenza strains to be introduced into the population.

Traditional emergency/disaster (earthquakes, etc.) response and recovery plans focus on damage to property, equipment, and infrastructure. However, the threat of influenza or other pandemic will be widely dispersed geographically and potentially arrive in waves that could last several months at a time. Public health studies and ongoing news reports indicate a pandemic or worldwide outbreak of a new influenza virus, or other highly communicable disease, could overwhelm health and medical capabilities globally. Given today's highly mobile population, disease outbreaks may occur simultaneously throughout the country making the reallocation of human and material resources more difficult than in other disaster or emergency situations and may threaten LBNL essential research and operations. Berkeley Lab performs research and operations that may be disrupted during a pandemic and adversely impact our ability to continue to operate.

1.1 Purpose of the Pandemic Preparedness and Response Plan

This plan is an annex to the Berkeley Lab Business Continuity Plan with an objective to ensure the continuance of Berkeley Lab's research and operations across a wide range of all-hazard emergencies including influenza pandemic.

The purpose of this Annex is to provide guidance and serve as the Berkeley Lab plan for maintaining essential functions and operations during an influenza event. The annex neither replaces nor supersedes the current approved Berkeley Lab Business Continuity Plan; rather it supplements it, bridging the gap between traditional all-hazards. The plan describes the actions that the Laboratory will implement in the event a pandemic occurs according to guidance from the U.S. Department of Health and Human Services (HHS), the Centers for Disease Control and

Prevention (CDC), the World Health Organization (WHO), and the Alameda County Public Health Department (ACPHD). In the event of an influenza pandemic, Berkeley Lab will have the following objectives:

- Protect and support the health, safety, and welfare of our staff, users, subcontractors, and visitors.
- Reduce influenza among staff
- Protect staff who are at increased risk of influenza related complications from contracting influenza
- Support essential services staff remaining at the Laboratory if we reduce operations.
- Maintain research and operations.
- Establish benchmarks or triggers to prompt prudent Laboratory actions.
- After the pandemic, recover and resume normal research and operations as soon as possible.

The Pandemic Planning Response Team was formed to produce these preparedness and response activities to mitigate the impact of such a pandemic outbreak. Our plan is designed to ensure that Berkeley Lab is prepared to implement an effective response before a pandemic arrives, throughout a response if an outbreak occurs, and after the pandemic is over. It is intended to be dynamic and interactive; it consists of components that are consistent with international, federal, state and local guidelines as well as general principles of emergency response and utilizes the Incident Command System/Emergency Operations Center (ICS/EOC) structure.

1.1.1 Pandemic Plan Update and Implementation Process

The Pandemic Preparedness and Response Plan is reviewed annually by the Business Continuity Program Manager and the Pandemic Planning Response Team. Plan revisions incorporate Lessons Learned in part from simulated exercises at the Lab or other DOE Sites.

Major revisions to the Pandemic Preparedness and Response plan are approved by:

- LBNL Chief Operating Officer
- EH&S Division Director

- Business Continuity Program Manager

A major revision to the Pandemic Preparedness and Response Plan may involved a substantive change to the Plan, such as scope, performance, responsibilities, processes that mitigate risks, and/or DOE requirement modifications.

The Business Continuity Program Manager, in consultation with the appropriate stakeholders, will approve minor changes to the Plan. The Plan is a living document. All amendments to the Plan will be documented, logged, and maintained in the Business Continuity Program Office. Changes to specific pages will not necessitate reprinting the entire plan. Old pages will be removed, and revised pages will be inserted into the Plan, with the revision date noted at the bottom of each page.

1.1.2 Distribution of Copies

Printed copies of the Pandemic Preparedness and Response Plan are located the Business Continuity Program Office. Electronic copies of the Plan are maintained on the LBNL Business Continuity website.

1.2 Concept of Operations

This annex is built upon the assumption that the Pandemic Influenza Federal Response Stages, WHO Response Phases, CDC Severity Index, and the Berkeley Lab Response Stages will serve as "triggers" for Berkeley Lab actions. These are identified in Appendix 1. As such, response actions are included in Appendix 2. In addition, the Laboratory Director may choose to add additional Pandemic Plan activation criteria and responses to reflect the unique nature of the Laboratory. These may be pre-identified in Appendix 2 or may be communicated as needed during implementation of the Berkeley Lab Pandemic Preparedness and Response Plan.

1.3 Pandemic Planning Assumptions

Given how easily seasonal viruses spread each year, it is assumed that the Laboratory research and operation environment cannot be maintained in a major global pandemic without putting staff, users, visitors, and others at risk of infection. The National Plan and other health sources recommend taking steps toward physical distancing (social distancing), minimizing public assemblies, proper cough/sneeze etiquette, increased hand-washing and other actions in order to slow the spread of the virus. In addition, Berkeley Lab could receive guidance from local, state, or federal authorities to reduce operations or close.

The plan applies to the initial pandemic influenza outbreak, as well as to subsequent waves. A pandemic outbreak could interrupt normal Laboratory functioning for a period of from two to four weeks up to several months. At all times, the health and safety of the whole community is of paramount importance. Protocols for health and safety measures have been developed and will be communicated.

The following planning assumptions were considered:

- Susceptibility to the pandemic influenza virus will be universal.
- A pandemic is a public health emergency that takes on significant political, social and economics dimensions, and will be governed by factors that cannot be known in advance.
- Efficient and sustained person-to-person transmission signals an imminent pandemic.
- The clinical disease attack rate will likely be 30% or higher in the overall population during the pandemic.
- Of those who become ill with influenza, 50% will seek outpatient medical care. With the availability of effective antiviral drugs for treatment, this proportion may be higher in the next pandemic.
- The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ about 10-fold between more and less severe scenarios. Two scenarios are presented based on extrapolation of past pandemic experience (Table 1). Planning should include the more severe scenario. Risk groups for severe and fatal infection cannot be predicted with certainty but are likely to include infants, the elderly, pregnant women, and persons with chronic medical conditions.
- Rates of absenteeism will depend on the severity of the pandemic. In a severe pandemic, absenteeism attributable to illness, the need to care for ill family members, and fear of infection may reach 40 per cent during the peak weeks of a community outbreak, with lower rates of absenteeism during the weeks before and after the peak. Certain public health measures (closing schools, quarantining household contacts of infected individuals) are likely to increase rates of absenteeism.
- The typical incubation period (interval between infection and onset of symptoms) for influenza is approximately 2 days.
- Persons who become ill may shed virus and can transmit infection for up to one day before onset of symptoms. Viral shredding and the risk of transmission will be greatest during the first two days of illness. Children usually shed the greatest amount of virus and therefore are likely to post the greatest risk of transmission.
- On average, infected persons will transmit infection to approximately two other people.
- A pandemic outbreak in any given community will last about six to eight weeks for each wave of the pandemic.
- Multiple waves (periods during which community outbreaks occurs across the country) of illness could occur with each wave lasting two-three months.

Historically, the largest waves have occurred in the fall and winter, but the seasonality of a pandemic can't be predicted with certainty.

- The stages of the pandemic should occur sequentially, though they may overlap or occur so rapidly as to appear to be occurring simultaneously or being skipped.
- Essential functions, Berkeley Lab research and operations requirements will continue to be people dependent These activities require human interactions to be carried out, however many interactions may not require face-to-face contact or can be conducted with precautionary measures.
- Travel restrictions, such as limitations on mass transit, implemented at Federal, State, and local levels will affect the ability of staff to get to work.

Table 1: Number of Episodes of illness, Healthcare Utilization, and Death Associated with Moderate and Severe Pandemic Influenza Scenarios*

Characteristics	Moderate (1958/68-like)	Severe (1918-like)
Illness	90 million (30%)	90 million 30%)
Outpatient Medical Care	45 million (50%)	45 million (50%)
Hospitalizations	865,000	9,900,000
ICU Care	128,750	1,485,000
Mechanical Ventilation	64,785	745,500
Deaths	209,000	1,903,000

*Estimates based on extrapolation from past pandemics in the United States. Note that these estimates do not include the potential impact of interventions not available during the 20th century pandemics.

2. Plans and Procedures

Berkeley Lab pandemic influenza planning and response actions shall be appropriately linked to the Federal Response Phases, WHO Phases, CDC Severity Index and Alameda County guidance (see Appendix 1 for Federal Response, WHO, CDC Severity Index). A change from one Phase to another automatically activates certain readiness measures and procedures.

2.1 Pandemic Coordination and Pandemic Planning Response Team

The Pandemic Planning Coordinator and Response Team will anticipate the impacts of a pandemic on Berkeley Lab and assist with developing strategies to manage the effects of a pandemic outbreak.

2.2 Directorate/Division Business Continuity Plans

Concurrently with the development of the Pandemic Preparedness and Response Plan, each directorate/division is developing a continuity plan to address specific issues related to their essential roles in preparing for and weathering a pandemic emergency. Business Continuity Planning is one of Berkeley Lab's vehicles for disaster readiness by research and operations divisions.

2.3 Sustaining Operations

Sustaining operations will be performed until normal business activity can be reconstituted; this may take longer than 30 days. The principal focus in making this determination will be the minimization of the effects of a pandemic on staff and operations. Berkeley Lab will emphasize and implement procedures such as social distancing techniques, infection control and personal hygiene, cross-training, and telecommuting to sustain operations.

2.4 Communications and Response Phases

Communications will be needed at different stages of the pandemic. Berkeley Lab will coordinate communications with those of the University of California Office of the President (UCOP) and the DOE Site Office. Accurate, timely, and consistent information at all levels will minimize unwanted and unforeseen social disruption and economic consequences and contribute to an effective response. Berkeley Lab will communicate with staff, users, visitors and stakeholders (internal and external). Communications will be maintained via use of the web, email, telephone, and the media depending upon the continued availability of each of these options. Communication to media will be handled by the Berkeley Lab Public Information Officer. The Laboratory Directorate will communicate

Lab-wide status to staff, users, and visitors. Division directors and department heads will provide communications and guidance to their staff. Specific plans for communication are outlined in the five Pandemic Flu Stages outlined in Appendix 2. For each of these phases, draft communications will be developed in advance for use as needed. The following communications vehicles may be used:

- Web – Berkeley Lab has developed a Pandemic website, pandemic website (http://pandemic.lbl.gov) , linked to the Berkeley Lab Home Page, which will broadcast information of a general nature, including Laboratory general site status information and specific Pandemic Flu information. Web access will be maintained as an information source for Berkeley Lab staff and users.

- E-mail – Berkeley Lab has a mechanism in place for authorizing mass e-mail to the Berkeley Lab community.

- Telephone – Berkeley Lab landline telephones will be supported and will include all current telephone lines. The Berkeley Lab Emergency Status Line – 1-800-445-5830 will be used as needed to keep staff and the user community informed of the situation at Laboratory. Telephones and cell phones may be used to conduct essential business and to contact essential staff as needed.

- Media – Critical messages may also be disseminated via newspapers, commercial and public radio and television broadcasts by the Berkley Lab Public Affairs Department.

2.5 Essential Functions

Given the duration and potential for multiple waves of a pandemic, Berkeley Lab directorates/divisions will review their essential functions and services and identify those that are essential to assure the safety, security, and health of the Berkeley Lab staff and site. Identification of these functions will take into account the need to perform essential functions beyond the traditional 30-45 days continuity requirement. These requirements will be identified in directorate/division continuity plans. Essential operations for purposes of this plan is defined as operations of functions essential to maintain essential infrastructure of Berkeley Lab to allow for the safe, secure, orderly shutdown of the site and maintenance in a standby state, should Berkeley Lab Stage D (see Appendix 2) be triggered and an order to close the Lab is issued. These include functions that would need to be available to ensure that the site infrastructure could be placed in a mode that would result in no permanent damage or loss and would allow recovery to proceed at a reasonable speed and cost. This would also include functions that will allow for remote work to be conducted during social distancing activities covered under this plan.

2.6 Essential Positions and Skills

Berkeley Lab directorates/divisions will identify positions, skills, and personnel needed to continue essential functions and operations. Directorates/divisions will also identify back-up personnel and ensure that all personnel needed to perform those essential functions shall also receive continuity and specific pandemic influenza training. These requirements are addressed in the directorate/division business continuity plans.

Employees designated as "essential staff" are those identified to support "essential operations" during the emergency. These may include persons who may need to function on-site or from remote locations to maintain essential operations. Actions to limit exposure of essential staff to the virus will be implemented. Essential staff may be requested to work multiple shifts and some essential staff may need to be on site to service critical systems.

Loss of essential staff to illness or care for a loved one will necessitate development of back-up options for essential functions. Absenteeism attributable to illness, the need to care for ill family members, and fear of infection may reach 40% (http://www.pandemicflu.gov/). Absenteeism may also be increased by the closing of day care centers, public schools, transportation, quarantines, and other measures taken by public health officials early in the pandemic.

2.7 Impact of Absenteeism on Laboratory Operations

Berkeley Lab will track the impact of absenteeism on Laboratory Operations by utilizing a simple web-based survey tool developed by the Information Technology (IT) Division. Based on the event, the Emergency Operations Center (EOC) will develop the survey questions and request that IT modify and activate the survey tool.

2.8 Alternate Work Arrangements and Physical Distancing (Social Distancing)

Berkeley Lab will assess which essential functions and operations can be conducted through the use of alternative work arrangements and use social distancing techniques that may include:

- Work from home
- Staggered shifts
- Phone and web-based conferencing meetings and discussions instead of face to face meetings

- Speaking from a distance of 6 feet or greater from a coworker
- Personal Protective Equipment, which may include masks, gloves, and other hygienic items
- No handshaking

2.9 Essential Contract and Services Interdependencies

Contractual Staff- Berkeley Lab shall initiate pre-solicited, signed and standing agreements with contractors and other third parties to ensure fulfillment of mission requirements.

Other Interdependencies- Berkeley Lab shall identify the contractors, suppliers, shippers, resources and other businesses that it interacts with on a daily basis. Berkeley Lab shall develop relationships with more than one supplier should a primary contractor be unable to provide the required services. These requirements are addressed in the directorate/division Business Continuity Plans.

2.10 Vital Records

Berkeley Lab will identify, protect, and ensure the ready availability of electronic and hardcopy documents, references, records, and information systems needed to support essential functions for up to several months.

The Berkeley Lab Directorate and Division Business Continuity Plans in the UC Ready database identifies records and databases needed to sustain essential functions and services.

2.11 Human Resources

Although a pandemic influenza will not directly affect the physical infrastructure, a pandemic will ultimately threaten all operations by its impact on an organization's human resources. The health threat to personnel is the primary threat to maintaining essential research and operations during a pandemic. To assist directorates and divisions in making sure they are able to continue their operations, while at the same time, preparing and protecting their workforce should a pandemic influenza outbreak occur, the Human Resources Department has developed guidance on leave, pay, hiring, alternative work arrangements, and other critical human resources issues in relation to pandemic influenza. This information is located in Appendices 2 and 3.

Berkeley Lab will review this information and develop, update, and be able to implement comprehensive human resource plans to protect its workforce.

2.12 Environment, Health and Safety

Berkeley Lab will take all reasonable and necessary actions to protect the health of its staff, including those identified as "essential". We will conduct business from a social distance, including from home, via web meetings and by telephone. Measures that may be utilized to promote a safe workplace during a pandemic will be aimed at preventing the spread of pandemic influenza viruses and may include encouraging reduced contact between employees and the practice of public health/hygiene etiquette. Employees who become ill will be asked to stay home.

Travel may be restricted and those returning from infected locations and travelers will be asked to voluntary quarantine themselves and may be instructed to do so.

Berkeley Lab Health Services has identified response actions located in the Berkeley Lab Response Actions (Appendix 2).

3. Governance and Command Structure

3.1 Authority

The Director of the Laboratory may, in consultation with the Emergency Operations Center (EOC) Director, the University of California Office of the President (UCOP), and the DOE Berkeley Site Office, when possible, with Laboratory members, declare a state of emergency and place into effect orders appropriate to the emergency. Berkeley Lab's response to an Influenza Pandemic declared emergency will be managed through the EOC (see EOC structure Appendix 4).

During a declared Operational Emergency, the Lab Director delegates authority for coordinating and facilitating the emergency response and recovery to the Emergency Operations Center Director and the Emergency Response Organization (ERO). The decision to close Berkeley Lab will be made by the Laboratory Director in consultation with the above entities. It will occur at a point after the first case is confirmed in the United States and based upon a combination of the following decision criteria/factors:

- WHO declaration of Phase 6 – Pandemic period plus and increased and sustained transmission of a novel CDC Severity Index of 4-5 virus
- Confirmation of a high rate of infectivity, morbidity (rate of infection) and/or mortality (death rate)
- Rate/speed of disease spreading
- Local public health recommendations to curtail/cancel public activities in the county or state
- Significantly rising employee absenteeism
- Transportation systems closing/curtailing interstate travel
- Berkeley Lab decision to go Stage D
- Cases in the local Bay area occurring early in the overall U.S. experience with the unfolding pandemic

Most administrative and support operations will be substantially reduced or suspended. Utilities will be supplied to buildings. However, routine, normal daily housekeeping and maintenance activities will cease until such a time when the re-opening of buildings is announced. Essential staff will be needed to maintain a safe and secure site; however, the way in which these essential staff conduct themselves while on site will be done in a manner to minimize exposure to others who may be carrying the virus.

3.2 Delegation of Authority

At the height of a pandemic wave, absenteeism may reach a peak of 40 percent. As such, delegations of authority are critical. Overall responsibility for Berkeley Lab policy decisions rests with the Lab Director. When the Lab Director is unavailable, the sequence of delegated authority follows this command:

1. Deputy Laboratory Director
2. Associate Laboratory Director for Operations/Chief Operating Officer (COO)
3. Associate Laboratory Director for General Sciences
4. Associate Laboratory Director for Life Sciences
5. Associate Laboratory Director for Photon Sciences
6. Associate Laboratory Director for Computing Sciences
7. Associate Laboratory Director for Energy and Environmental Sciences

Directorates and Divisions are developing plans for Delegations of Authority that will include at least three deep in responsibility.

The Berkeley Lab Delegation of Signature Authority is located at http://www.lbl.gov/Workplace/CFO/SAS/sigauth.html.

3.3 Coordination

Every effort will be made to coordinate the actions and functions described in this plan with the City of Berkeley, Alameda County, the UCOP, the Berkeley DOE Site Office and any other affected jurisdictions or entities.

3.4 Activation

Activation of a state of emergency for Influenza Pandemic will follow guidelines outlined in the Laboratory's Master Emergency Program Plan, which also describes authority for activating the EOC (see Appendix 4 EOC Organization)

4. Recovery

Recovery efforts should begin immediately and continue throughout the response phase of any emergency/disaster. Planning for recovery before an event will assist staff to make the transition as seamless as possible. Recovery efforts may be thwarted by the unknown duration of the actual event and the unknown numbers of staff affected.

4.1 Resumption Operations

Based on information developed by the EOC and ongoing reviews of the international, national and local situation and discussions, the Laboratory Director will recommend a partial, incremental, or total return to normal operations. Any such discussions will be communicated to, and coordinated with the UCOP and the DOE Berkeley Site Office.

4.2 Support for Staff

Many people will be affected by a pandemic in a variety of ways. They may have lost friends and relatives, suffer from fatigue, or have financial losses as a result of the interruption of work. Services should be made available to staff through Laboratory resources and be communicated through all available means.

4.3 Analysis and After-Action Reports

Once the recovery is underway, meetings will be convened to discuss response, changes as necessary to current plans, and opportunities for improvement of response to future disasters. A formal after-action report will be developed and distributed to the Laboratory Director.

5. Testing, Training, and Exercises

This plan shall be tested and reviewed at least annually to determine the need to revise or include updates reflective of significant new information, new collaborative agreements, or revised actions to be taken within any of the phases or functions delineated in this plan. The results of this test and review shall be communicated to the Laboratory Chief Operating Officer at the beginning of each fiscal year, with appropriate action recommended for approval.

5.1 Tabletop, Functional, and Full-Scale Exercises

Berkeley Lab will conduct annual pandemic exercises (tabletop, functional, or full scale) to examine the impacts of pandemic influenza on the Laboratory's essential functions, to familiarize Laboratory personnel with their responsibilities, and to validate the effectiveness of pandemic influenza continuity planning by senior leadership.

5.2 Annual Awareness Training

Berkeley Lab shall conduct annual awareness briefings specific to pandemic influenza.

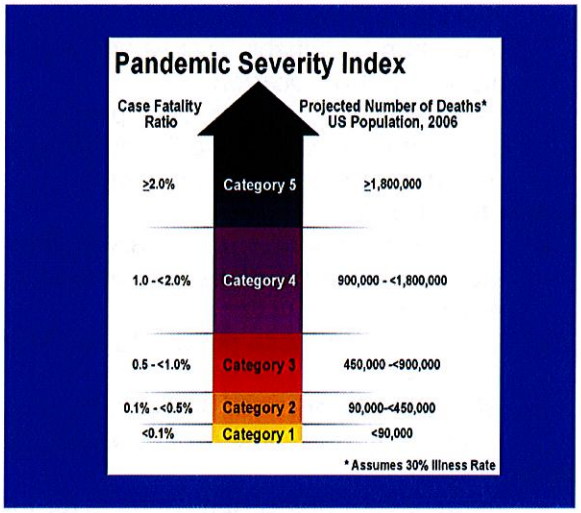
6. Conclusion

Maintaining essential functions and operations in the event of pandemic influenza requires additional considerations beyond traditional continuity planning. A pandemic threatens an organization's human resources by removing essential personnel from the workplace for extended periods of time. Accordingly, Business Continuity Plans should be modified and supplemented to achieve a pandemic influenza capability. Plans for maintaining essential functions and operations in a pandemic influenza must emphasize and implement procedures such as social distancing techniques, infection control and personal hygiene, cross-training, and telecommuting. Protecting the health and safety of employees must be the focus of planning in order to ensure continuity of essential functions and continuity of Laboratory research and operations.

7. Appendix 1: Federal Government Response Phases, World Health Organization (WHO) Phases, CDC Pandemic Severity Index, and Berkeley Lab Pandemic Stages Matrix

Federal Government Response Phases						
Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
New Domestic Animal Outbreak in At-Risk Country	Suspected Human Outbreak Overseas	Confirmed Human Outbreak Overseas	Wide-spread Human Outbreaks in Multiple Locations Overseas	First Human Case in North America	Spread throughout United States	Recovery and Preparation for Subsequent Waves
WHO Phase 1 or 2: Inter-Pandemic Period	WHO Phase 3 Pandemic Alert Period	WHO Phase 4 or 5 Pandemic Alert Period	WHO Phase 6 Pandemic Period			

Centers for Disease Control and Prevention (CDC)



Berkeley Lab Pandemic Stages Matrix

Severity Index/ WHO Stages	1-2	3-4-5	6
Low (1)	A	B	B
Med (2-3)	B	B/C	C
High (4-5)	B	C/D	D

8. Appendix 2: Berkeley Lab Pandemic Response Actions

Berkeley Lab Stage: A
Pre-pandemic Planning and Monitoring
(WHO Phase 1 or 2; Federal Response Stage 0; Pandemic Severity Index L-M)

Location	Limited/isolated international cases
Population Affected	Lab travelers or vacationers
Mitigation	**Directors Office** • Clarify roles and expectations for Berkeley Lab organizations • Identify funding sources for preparedness supplies • Make determinations re: plan/funding for programmatic supplies and critical supply chain items **Directorate/Division/Department** • Review and update Business Continuity Plans for communications, operations, research interruptions • Identify "essential personnel" and services • Develop list of contacts of program-specific external suppliers, contractors, vendors, etc • Provide sufficient and accessible infection control supplies (e.g., hand sanitizer, tissues and receptacles for their disposal) at all locations • Using HS guidance, establish process to monitor staff who are ill or suspected to be ill, including staff who are unexpectedly absent from work **Human Resources** • Document or review temporary leaves, telecommuting, alternate work schedule policies during a pandemic emergency • Communicate these policies to Lab Management and to HR Centers • HR Centers work with divisions to develop plan for temporary replacement of essential staff **Travel Office** • Require communication contacts for international travel **Information Technology** • Review policy, operational procedures, infrastructure and methodology for remote access • Ensure Help Desk and Remote Access FAQs are up-to-date • Review contingency plans for maintenance and support of large-scale telecommuting scenario (work from home directive) **Public Affairs** • Develop Pandemic Website **Facilities/Procurement (CFO)** • Establish plans and contingencies to obtain and distribute necessary supplies • Communicate guidelines to BERKELEY LAB employees **EH&S**

	• Fit test designated users of N-95 masks • Develop training for badge office, security, custodial, café workers and others on maintaining health (with support from HS and Facilities) **Health Services** • Education of lab employees and travelers (with Public Affairs) • Avoidance of high-risk environments • CDC guidance • Local public health recommendations • Develop resource list of community counseling and crisis centers • Make arrangements to obtain vaccine
Mission Impact	Minimal impact on current research

Berkeley Lab Stage: B
Enhanced Planning: Lab Open
(WHO Phase 3, 4 or 5; Federal Response Stage 1 or 2; Pandemic Severity Index-M)

Location	Suspected or confirmed human-human international outbreak
Population Affected	Lab travelers, vacationers and visitors
Mitigation	**Directors Office** • Convene Pandemic Response Team • Consider visitor, guest and return-to-work (travel and vacation) screening • Consider restricting student and GSRA access • Consider restrictions or cancellation travel to affected areas • Consider recalling healthy travelers from affected countries • Utilize UCOP travel evacuation insurance for sick travelers • Consider cancelling international conferences hosted at Berkeley Lab **Directorate/Division/Department** • Conduct divisional all-hands meetings to disseminate management directives • Track all employees on travel and support return-to-work screening processes • Track all employee sick leave and report to HS • Consider re-schedule of new hire start dates **Human Resources** • Communicate these policies to Lab Management and to HR Centers Communicate temporary leaves, telecommuting, alternate work schedule policies during a pandemic to managers and supervisors **Travel Office** • Review travel routes for stopover in affected countries **Public Affairs** • Website goes live • Communicate updated information on precautions, policy, benefits and contingency plans to employees **Security/Facilities**

	• Support visitor screening implementation • Direct ill persons to HS • Utilize medical auxiliary team • Re-route bus system as needed **Facilities/Procurement** • Implement resource contingency plans **Health Services** • Monitor outbreak, CDC guidance • Communications with local public health entities • Implement visitor and return-to-work screening • Provide FAQs data for Pandemic Website • Support EH&S training efforts • Consider cancellation of routine appointments • Activate medical auxiliary team (EM) • Administer vaccine, if available
Mission Impact	Variable, depending on severity and affected countries. Actions may include: • Delay or cancellation in international collaborations • Possible shortage of supplies produced overseas • Potential for loss of funding

Berkeley Lab Stage: C
Lab Open: Preparing for Reduced Operations-Pandemic Spreading
(WHO Phase 6; Federal Response Stage 3, 4 or 5; Pandemic Severity Index M-H)

Location	Widespread in US and local; changing rate of infectivity, morbidity and/or mortality Consider possible triggers: • Moderate to high pandemic severity index • Locally acquired pandemic cases • Local official decision to suspend public gatherings • Significantly rising employee absenteeism • One or more cases in employees who were onsite during contagious phase • School closures
Population Affected	All Berkeley Lab employees, travelers and visitors
Mitigation	**Consider EOC Activation** **Directors Office** • Recommend cancellation of all lab travel (exceptions reviewed) • Recommend cancellation of international conferences hosted at Berkeley Lab • Recommend implementation of social distancing measures (e.g. work from home, teleconferencing, modified work schedules) • Mandate case reporting to Health Services • Mandatory return-to-work screening **Directorate/Division/Department** • Implement social distancing guidelines (Pandemic Website) • Allow work at home • Maintain contact with all employees • Implement local disinfection of common use areas **Human Resources**

	• Solicit Lab Management approval for Public Emergency Leave communication to Lab population • Notify payroll of possible paid leave • HR Centers work with divisions to develop plan for temporary replacement of essential staff • Communicate temporary leaves, telecommuting, alternate work schedule policies during a pandemic to managers and supervisors **CFO** • Based on the unique circumstances of each event, implement financial contingency plans **Public Affairs** • Activate Crisis Communication Plan • Communicate key measures to staff and community re: Berkeley Lab operational status, protective measures and expectations of employees **Emergency Management** • Teleconference with community partners to update Berkeley Lab level and associated activities (EOC list) **Facilities** • Enhanced hygiene measures **Information Technology** • Validate Remote Access infrastructure, increase capacity if needed • Ensure Help Desk are available (telecommute OK) to assist Lab employees setting up remote access **Health Services** • Implement social distancing precautions • Cancel routine appointments • Send all symptomatic employees home • Initiate telephone triage • SOMD communications with local public health agencies • Work with Public Affairs to ensure accurate and timely information to employees
Mission Impact	Profound impact. Potential for site closure order by local public health officials, UCOP or DOE officials. • Disruption of supply chain • Delay or cancellation of research

Berkeley Lab Stage: D
Reduced or Essential Operations Only-Severe Local Pandemic
(WHO Phase 6; Federal Response Stage 5; Pandemic Severity-High)

Location	Local extended emergency condition; possible emergency declaration. Numbers of employee illness threaten essential operations or safety.
Population Affected	All Berkeley Lab employees, travelers, visitors
Mitigation	**EOC Activation and Declaration of Lab Closure** ***Conversion to Incident Command Structure*** *(App 4)* **Directors Office** • Issue essential personnel order to maintain critical operations as identified in business continuity plans (e.g., facility maintenance, animals, cell lines, superconducting magnets) during shutdown

	• Authorize work from home/teleconferencing • Consult with UCOP, DOE for re-opening **Directorate/Division/Department** • Conduct daily assessment of health/availability status of all employees on essential personnel list • Ensure reporting of all employee illness and RTW clearance through Health Services **Human Resources** • Implement plan for temporary replacement of essential staff as necessary **Information Technology** • Ensure Remote Access infrastructure and capacity **Health Services** • Maintain core operations to follow up on illness reports and to facilitate medical care • Deploy preventive measures to essential personnel • Consult with local public health officials for re-opening
Mission Impact	Profound impact. Work from home unless essential for critical operations.

Berkeley Lab Stage: E
Recovery and Re-opening
(WHO Post-Peak and Post-Pandemic; Federal Response Stage 6)

Location	Local
Population Affected	Laboratory Management and Essential Personnel
Actions	Convene Recovery Team, led by Lab Director or designee, to consult with local officials on Berkeley Lab re-opening. As conditions return to normal, issues that arose during closure will be addressed and plans and guidance updated

9. Appendix 3: Berkeley Lab Available Leaves of Absences

Pandemic Emergency: Available Leaves of Absences

LEAVE TYPE	DESCRIPTION	LENGTH OF LEAVE	PAID LEAVE	USE OF SICK/VACATION ACCRUAL	EMPLOYEE ELIGIBILITY	LEAVE APPROVER
Public Emergencies	Leave with pay may be allowed during public emergencies that effectively prevent an employee from attendance at work or continuance of work in a normal and orderly manner. A public emergency includes fire, explosion, power failure, flood, earthquake, snowstorm (Washington, D.C., offices only), protest demonstration, riot, sabotage, and other comparable occurrences.	TBD	Yes or No. Lab Director decision.	When an employee is absent because of personal reasons resulting from a public emergency, the employee should charge this absence to accrued vacation or leave without pay.	All employees including CX, SX, TX, RX employees	Chief Operating Officer (COO)
Civil Disaster Units	Leave with pay may be allowed for search-and-rescue or disaster-control work by an employee as a member of an organized civil disaster unit. Leave with pay is not granted for training, drills, or practice exercises.	TBD	Yes	N/A	Non-represented employees.	Supervisor
Sick	For employee's or employee's family member illness.	TBD	Yes	Sick Leave	All employees with accrued sick leave	Supervisor
Vacation	For personal time off.	TBD	Yes	Vacation Balance	All employees with accrued vacation leave	Supervisor
Bereavement	For bereavement of family or friend.	Up to 5 days for family member	Yes	Sick Leave	All employees with accrued sick leave	Supervisor
Personal Leave	For personal time off	TBD	No	Vacation Balance	Career employee	Supervisor

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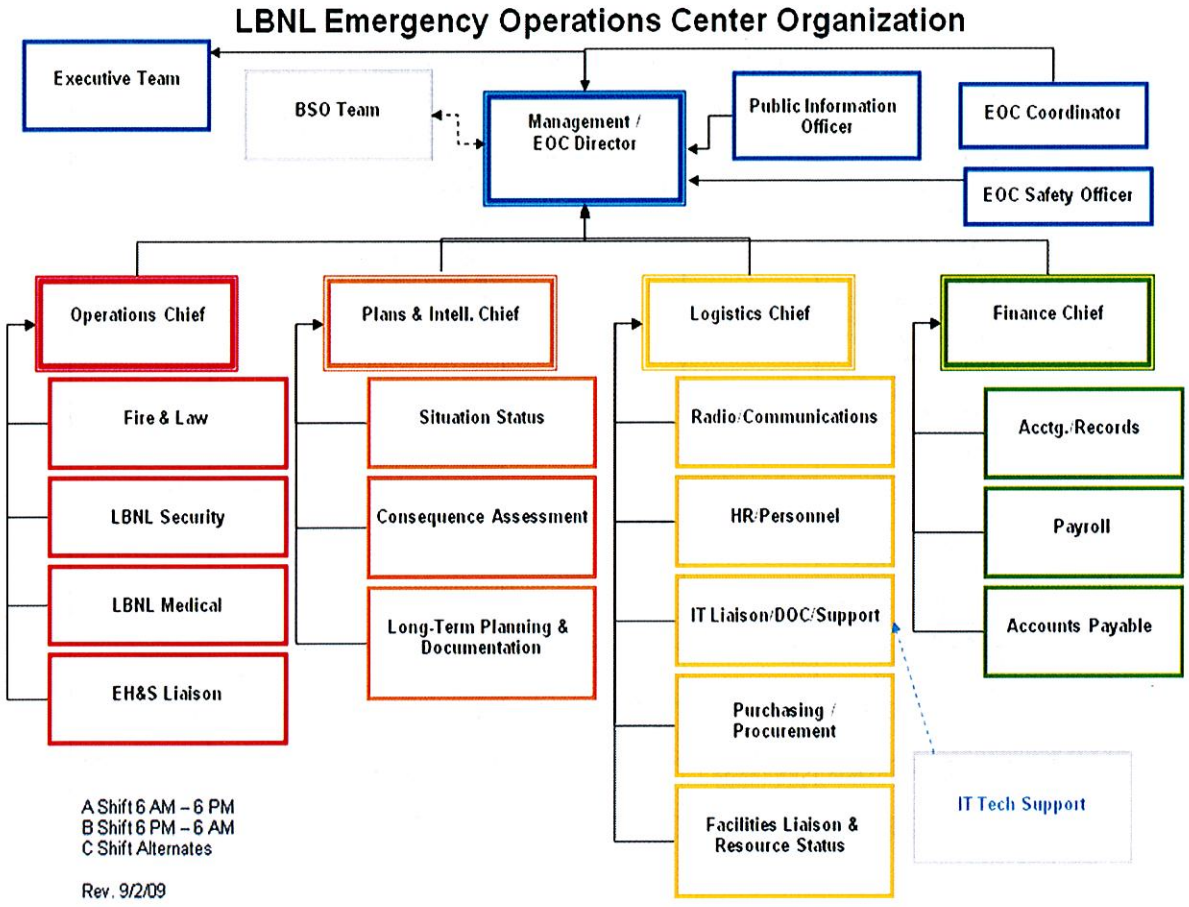
10. Appendix 4: Emergency Operations Center (EOC) Structure



11. Resources

World Health Organization http://www.who.int/csr/en/

Centers for Disease Control http://www.cdc.gov/h1n1flu/

Pandemic Flu.gov http://www.pandemicflu.gov/

US Dept. of Health & Human Services http://www.hhs.gov/

Alameda County Public Health Department http://www.acphd.org/H1N1/

University of California Office of the President (UCOP)
http://www.ucop.edu/riskmgt/emergprep/eonews/

Center for Infectious Disease and Emergency Readiness, University of California, Berkeley http://www.idready.org/